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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,243	01/23/2004	Zoran Stanisic	143461	8033
7590	02/03/2005		EXAMINER	
John S. Beulick Armstrong Teasdale LLP Suite 2600 One Metropolitan Square St. Louis, MO 63102			BENSON, WALTER	
			ART UNIT	PAPER NUMBER
			2858	
DATE MAILED: 02/03/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/764,243	Applicant(s) STANISIC ET AL.	
	Examiner Walter Benson	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on IDS filed 4/29/2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 24 is/are allowed.
- 6) ☒ Claim(s) 12-14 and 27 is/are rejected.
- 7) ☒ Claim(s) 15-23, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/29/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-27 are presented for examination.

Drawings

2. The drawings are objected to because
 - a. Figure 5, item 506, equation shown on the plus input is incorrect based on the same equation shown in the specification on page 10, paragraph [0033], line 12;
 - b. Figs 3 and 4, item 314, requires a legend

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

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and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-14, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lavoie (US Patent No. 6,798,209 B2 and Lavoie hereinafter) in view of Toya et al. (US Patent No. 4,937,698 and Toya hereinafter).

5. As to claim 12, Lavoie discloses a circuit breaker test device for analyzing contacts of a circuit breaker substantially as claimed, the test device comprising:

a test voltage source configured to supply a test voltage to a load-side contact and a line-side contact of the circuit breaker (col. 5, lines 16-19);

a sensing circuit coupled to the test voltage source, said sensing circuit configured to monitor an output of said test voltage source (col. 4, lines 32-35);

a microprocessor coupled to an output of said sensing circuit, the microprocessor configured to receive the output of said sensing circuit (col. 5, lines 64-67);

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Lavoie did not expressly disclose:

a ground circuit electrically coupled to the load-side contact of the circuit breaker;

a ground circuit electrically coupled to the line-side contact of the circuit breaker.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Lovoie, as evidenced by Toya.

Toya discloses a system or foreseeing deterioration in interrupting performance of an interrupter having:

a ground circuit electrically coupled to the load-side contact of the circuit breaker (6a, 42b, Fig. 2; col. 3, lines 10-13 and lines 55-58) for measuring the applied signal;

a ground circuit electrically coupled to the line-side contact of the circuit breaker (6b, 42b, Fig. 2; col. 3, lines 13-19 and 55-58).

Given the teaching of Toya, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying Lovoie by employing the well known or conventional features of circuit breaker testing, such as disclosed by Toya in order to efficiently detect the potential between the fixed and movable electrodes to judge the contact performance and for the purposes discussed above.

6. As to claim 13, Lovoie discloses a circuit breaker test device where the microprocessor is programmed to at least one of analyze data contained within the output of the sensing circuit, control parameters of the test voltage source, receive commands from an operator, execute scripts that include automatic testing procedures, and generate testing data output (col. 5, lines 58-64).

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7. As to claim 14, Lovoie discloses a circuit breaker test device where the test voltage source is configured to supply a selectably variable test voltage at a predetermined frequency (col. 5, lines 22-25).

8. As to claim 27, Lovoie discloses a circuit breaker test device where the microprocessor is programmed to determine at least one of a contact movement, a contact status, and a parameter value indicative of a health of the at least one contact pair using data contained within the output of the sensing circuit (col. 7, lines 5-14).

Allowable Subject Matter

9. Claims 15-23, 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to teach in combination as claimed a circuit breaker test device where the test voltage source is configured to supply a test voltage at a frequency greater than approximately one kilohertz. A transformer comprising a first winding coupled to said test voltage source. A resistor coupled to the first winding, the resistor configured to drop test voltage source voltage for measuring current through the first winding.

10. Claims 1-11 and 24 are allowed.

The prior art of record fails to teach in combination as claimed a method for evaluating at

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10. Claims 1-11 and 24 are allowed.

The prior art of record fails to teach in combination as claimed a method for evaluating at least one electrical pair by applying a test voltage across the contact pair while the line-side contact and load-side contact remain electrically coupled to electrical ground. Triggering a contact pair operation timer at a start of a test. Detecting at least one of a first closure of the contact pair and a first opening of the contact pair using the test voltage. Determining the timing of the contact pair based upon the operation of the contact pair operation timer. Further to claim 24, a grounding cable including a coaxial cable where a signal conductor first end is coupled to electrical ground through a first winding of the transformer. A signal conductor second end is coupled to the at least one of a circuit breaker load-side contact and a circuit breaker line-side contact, a shield conductor first end is coupled to the test voltage source through a second winding of the transformer, and a shield conductor second end is coupled to the circuit breaker which has automatic testing procedures.

Prior Art Made of Record

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

A. Sands (US Patent No. 6,472,877 B1) discloses a method and apparatus for measuring the switch opening time;

B. Keleher et al. (US Patent No. 5,736,861) discloses a circuit breaker tester;

C. Fehr et al. (US Patent No. 4,326,167) discloses test circuit for high voltage apparatus.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter Benson whose telephone number is (571) 272-2227. The examiner can normally be reached on Mon to Fri 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Walter Benson
Patent Examiner

January 27, 2005